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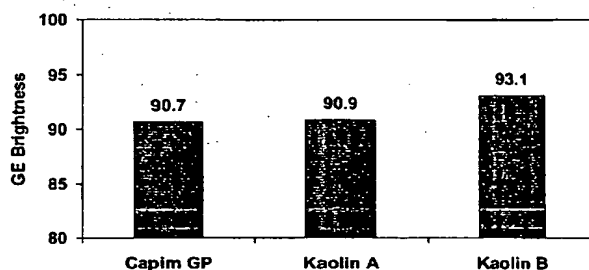
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(54) Title: KAOLIN PIGMENT HAVING HIGH BRIGHTNESS AND NARROW PARTICLE SIZE DISTRIBUTION AND METHOD OF PREPARATION THEREFOR

Pigment Brightness



Pigment A: Engineered particle size distribution

Pigment B: Engineered particle size distribution & selective flocculation

(57) Abstract: (061) The present invention provides high brightness kaolins exhibiting a Brightness (GE) of at least about 90.0. The hydrous kaolin pigments of the present invention may also have, *inter alia*, a steepness index ($d_{30}/d_{70} \times 100$) of at least about 39 and/or a *titania* concentration less than or equal to about 0.40% by weight of the pigment on a dry basis. (062) The hydrous kaolin pigment is produced by a process comprising: a) forming an aqueous suspension of a hydrous kaolin clay; b) forming a primary product by subjecting the suspension to classification or a combination of classification and gridding; c), separating the kaolin from impurities by selective flocculation; and d) defining the separated kaolin. (063) The hydrous kaolins of the present invention allow coated papers to be produced at high brightness while maintaining acidic conditions on a paper machine. The invention pigments exhibit brightness levels unexpectedly higher, e.g., about 2 to about 2.5 or more (GE) units brighter, than exhibited by previous high brightness hydrous kaolin pigments, without sacrificing other important paper properties. Paper coated with the inventive pigments have high brightness, high whiteness, and high fluorescence levels. The present invention encompasses these pigments, compositions comprising them, and any application in which they are used.